form a hydroxyalkylcellulose having on average from 0.001 to 1.0 alkyl group per anhydroglucose unit substitutions and from 0.01 to 0.1 sulfoalkyl group per anhydroglucose unit, wherein the degree of hydroxyalkylation is greater than 2.3.

The examiner is of the position that the present claims are anticipated by the teachings of EP0781780. However, it is respectfully submitted that the cited reference fails to teach every aspect of the claimed invention.

The examiner is correct that EP0781780 also relates to the preparation and use of polysaccharide derivatives whose parameters are similar to those of the instant claims. However, it is submitted that unexpected improvements are attained when certain selected hydroxyethylcellulose derivatives are formed. While EP0781780 mentions the degree of sulfoalkyl substitution to be in the range of 0.01 to 2.0 the present invention requires a much narrower 0.01 to 0.1 sulfoalkyl group per anhydroglucose unit. Also, while EP0781780 mentions their degree of hydroxyalkylation to be 0.1 to 10, the present invention requires a degree of hydroxyalkylation which is greater than 2.3.

It is submitted that the EP0781780 reference *does not describe the invention*, nor appreciate the unexpected results which are attained when the degree of sulfoalkyl substitution is 0.01 to 0.1 sulfoalkyl group per anhydroglucose unit and *simultaneously*, the degree of hydroxyalkylation is greater than 2.3.

Attatched for the consideration of the examiner is a Declaration under 37 CFR 1.132. This Declaration states that when both of these features is simultaneously present, when the hydroxyethylcellulose derivatives formed are included as a thickener in a paint formulation, an unexpectedly advantageous drip property is attained. This result is unexpected and unappreciated by EP0781780, and hence does not describe the invention.

In addition, although the degree of sulfoalkylation and hydroxyalkylation is very broadly mentioned in the EP0781780 reference, the narrow range which produces the

unexpectedly advantageous drip property when in a pain formulation, is not taught by the reference.

In addition, all of the Examples of this reference disclose a hydroxyethylcellulose having a degree of hydroxylation of 1.8. For instance, see Example 1 at page 8, lines 15-23. In contrast, the present invention requires a degree of hydroxyalkylation which is *greater than 2.3.* The examiner asserts that the cited reference mentions a degree of substitution from 0.1 to 10. However, Applicants urge that this broad range is theoretical and has *not* been supported by any experimental results in EP0781780. The only degree of substitution that has been experimentally supported according to this reference is 1.8. Importantly, the broad range of EP0781780 includes compounds which would not demonstrate the unexpected result. The **selection criteria** for attaining the unexpected advantage is not apparent from EP0781780. Hence, there is no description of the present invention.

EP0781780 discloses polysaccharide derivatives having a degree of substitution of sulfoalkylation which is *lower* than that required by the present invention. Indeed the examiner asserts that the cited reference mentions a degree of sulfoalkylation from 0.01 to 2.0. However, it is urged that this broad range is theoretical and has *not* been supported by any experimental results in EP0781780. EP0781780 discloses a degree of sulfoalkylation ranging from 0.1 to 1.0. In contrast, the present invention requires a degree of sulfoalkylation ranging from 0.01 to 0.1. While these ranges do barely meet at 0.1, Applicants urge that the useful range according to the present invention is *lower* than the useful range according to EP0781780.

Thus, since the present invention's degree of hydroxyalkylation is *higher* than the cited reference, and the inventive degree of sulfoalkylation is *lower* than the cited reference, Applicants urge that the present invention is patentably distinct from EP0781780. It is therefore respectfully urged that the 35 U.S.C. 102 rejection should be withdrawn.

The examiner has also rejected claim 1 under 35 U.S.C. 102 over EP0781780 to Miyajima et al. It is respectfully urged that this ground of rejection should be withdrawn.

Claim 1 discloses a water-soluble ionic cellulose ether comprising a hydroxyalkylcellulose having on average from 0.001 to 1.0 alkyl group per anhydroglucose unit substitutions and from 0.01 to 0.1 sulfoalkyl group per anhydroglucose unit, wherein the degree of hydroxyalkylation is greater than 2.3, made in accordance with the process of claim 7.

The examiner is of the position that the above claim is anticipated by the teachings of EP0781780. However, it is again respectfully submitted that EP0781780 fails to teach every aspect of the claimed invention.

The arguments against EP0781780 are repeated from above and apply equally here. In particular, it is urged that the present claims disclose a degree of hydroxyalkylation is *higher* than the cited reference, and the inventive degree of sulfoalkylation is *lower* than the cited reference, thus rendering the present invention patentably distinct from EP0781780.

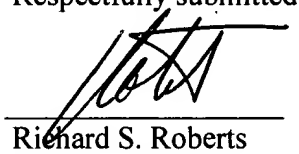
Furthermore, Applicants submit that the water-soluble ionic cellulose ether resulting from the inventive process differs from the resulting materials taught by EP0781780. In particular, it is urged the *starting material* of the present invention differs from the starting material of the cited reference. EP0781780 starts with a hydroxyethylcellulose having a degree of hydroxyalkylation of 1.8 and ends up with that degree. However, the present invention starts with a cellulose material having a *zero* degree of hydroxyalkylation and ends up, after a one step reaction, with a degree of hydroxyalkylation of 2.3 or more.

Thus, since the presently claimed process starts with a different material than EP0781780, and includes steps which differ from those taught by this cited reference, it is urged that the resulting water-soluble ionic cellulose ether of the present claims is

patentably distinct from the materials resulting from the process of EP0781780. Applicants therefore respectfully urge that the 35 U.S.C. 102 rejection should be withdrawn.

The undersigned respectfully requests re-examination of this application and believes it is now in condition for allowance. Such action is requested. If the examiner believes there is any matter which prevents allowance of the present application, it is requested that the undersigned be contacted to arrange for an interview which may expedite prosecution.

Respectfully submitted,



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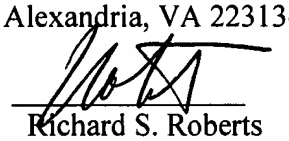

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